



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,555	12/20/2001	Linda J. Rankin	10559-636001/P12340	4689
20985	7590	01/03/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			KING, JUSTIN	
			ART UNIT	PAPER NUMBER

2111

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,555

Applicant(s)

RANKIN ET AL.

Examiner

Justin I. King

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The blank on line 18, page 2 has to be filled. Appropriate correction is required.
2. The description of drawings in the specification is objected to because of the following reason: The specification states that the figure 2 shows a node ID discovery process. The figure 2 does not show the node ID discovery process, it is a commonly known computer architecture as stated in specification page 1, last paragraph.

Drawings

3. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit: 2111

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 9-10, 17, 20, and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Cutler, Jr. et al. (U.S. Patent No. 5,572,512).

Referring to claim 1: Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4). Cutler discloses a System Control System (SCS) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed second node device. The node information stored in the routing table is the claimed node ID information for a third node device. The node receiving the SCS's routing table is the claimed first node.

The SCS's communication network address is the claimed determining node ID information of the second node device. The communication protocol between the routing table receiving node and the CSC is a protocol between the first node and the second node. Since the first node/receiving node has to recognize the 2nd node/CSC in order to establish the connection and to receive the routing table, the first node/receiving node's means to recognize the 2nd node/CSC is the claimed storing the second node device's node ID information on the first node device's storage device. The routing table includes other nodes' ID information; when the first node retrieves the routing table from the second node, it retrieves the node information for a third node. Both of Cutler's first node and third node are connecting to the SCS, which is the second node. Hence, claim is anticipated by Cutler.

Referring to claim 3: Since the CSC updates the routing table for every node, CSC's routing table is the claimed storing the node ID information for the third node device on the storage device located on the first node device. Cutler discloses that each node stores the node

Art Unit: 2111

ID of other neighboring nodes on its own routing table (column 1, lines 44-47, column 3, lines 42-46), which is the claimed third node including the forth node's ID information.

Referring to claim 4: Cutler discloses that each node's table is used to route packets to a particular address; the usage of the routing table information is retrieving the node ID information for the third node device.

Referring to claim 5: Since the CSC updates the routing table for every node, CSC's routing table is the claimed storing the node ID information for the third node device on the storage device located on the first node device. Cutler discloses that each node stores the node ID of other neighboring nodes on its own routing table (column 1, lines 44-47, column 3, lines 42-46), which is the claimed forth node including the fifth node's ID information.

Referring to claim 9: Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4). Cutler discloses a System Control System (CSC) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed first storage device, and the SCS is equivalent to the claimed first node device. The node information stored in the routing table is the claimed node ID information. The node receiving the SCS's routing table is the claimed second node. The second node's copy of the routing table is the claimed storing the node ID information on a storage device located on a second node device. Hence, claim is anticipated by Cutler.

Referring to claim 10: Cutler discloses that it is known to promulgate the node information to each node of the system (column 1, line 53). The promulgation is the claimed allowing a third node device to access the node ID information stored on the second node device.

Referring to claim 17: Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4). Cutler discloses a System Control System (CSC)

Art Unit: 2111

for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed second node device. The node information stored in the routing table is the claimed node ID information for a third node device. The node receiving the SCS's routing table is the claimed first node.

The SCS's communication network address is the claimed determining node ID information of the second node device. The communication protocol between the routing table receiving node and the CSC is a protocol between the first node and the second node. Since the first node/receiving node has to recognize the 2nd node/CSC in order to establish the connection and to receive the routing table, the first node/receiving node's means to recognize the 2nd node/CSC is the claimed storing the second node device's node ID information on the first node device's storage device. The routing table includes other nodes' ID information; when the first node retrieves the routing table from the second node, it retrieves the node information for a third node. Both of Cutler's first node and third node are connecting to the SCS, which is the second node. Hence, claim is anticipated by Cutler.

Referring to claim 20: Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4). Cutler discloses a System Control System (CSC) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed second node device. The node information stored in the routing table is the claimed node ID information for a third node device. The node receiving the SCS's routing table is the claimed first node.

The SCS's communication network address is the claimed determining node ID information of the second node device. The communication protocol between the routing table receiving node and the CSC is a protocol between the first node and the second node. Since the

Art Unit: 2111

first node/receiving node has to recognize the 2nd node/CSC in order to establish the connection and to receive the routing table, the first node/receiving node's means to recognize the 2nd node/CSC is the claimed storing the second node device's node ID information on the first node device's storage device. The routing table includes other nodes' ID information; when the first node retrieves the routing table from the second node, it retrieves the node information for a third node. Both of Cutler's first node and third node are connecting to the SCS, which is the second node. Hence, claim is anticipated by Cutler.

Referring to claim 23: Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4). Cutler discloses a System Control System (SCS) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed second node device. The node information stored in the routing table is the claimed node ID information for a third node device. The node receiving the SCS's routing table is the claimed first node.

The SCS's communication network address is the claimed determining node ID information of the second node device. The communication protocol between the routing table receiving node and the CSC is a protocol between the first node and the second node. Since the first node/receiving node has to recognize the 2nd node/CSC in order to establish the connection and to receive the routing table, the first node/receiving node's means to recognize the 2nd node/CSC is the claimed storing the second node device's node ID information on the first node device's storage device. The routing table includes other nodes' ID information; when the first node retrieves the routing table from the second node, it retrieves the node information for a third node. Both of Cutler's first node and third node are connecting to the SCS, which is the second node. Hence, claim is anticipated by Cutler.

Art Unit: 2111

Referring to claim 24: Cutler discloses each node updates using information received from the system control station (column 3, lines 43-44), which is the claimed remote node device retrieval process for retrieving node ID information.

Referring to claim 25: Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4). Cutler discloses a System Control System (CSC) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed first storage device, and the SCS is equivalent to the claimed first node device. The node information stored in the routing table is the claimed node ID information. The node receiving the SCS's routing table is the claimed second node. The second node's copy of the routing table is the claimed storing the node ID information on a storage device located on a second node device. Hence, claim is anticipated by Cutler.

Referring to claim 26: Cutler discloses that it is known to promulgate the node information to each node of the system (column 1, line 53). The promulgation is the claimed information access process for allowing a third node device to access the node ID information stored on the second node's storage device.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2111

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 6-8, 11-16, 18-19, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Cutler and Amberg et al. (U.S. Patent No. 5,664,221).

Referring to claim 6: Cutler's disclosure is stated above, but Cutler does not explicit disclose that the node ID information is specified on the node ID specification device. Cutler discloses that it would be obvious to one of skill in the art to adapt his invention to any communication links (column 3, lines 15-19). Amberg discloses a SCSI network and each SCSI device has a jumper for setting the SCSI ID. Amberg teaches that it is known to set a node ID information with a physical node ID specification device. Amberg teaches one to set a user-specified static network address to support particular network communication and maintenance.

Hence, it would have been obvious to one having ordinary skill in the computer art to adapt Amberg's teaching onto Cutler because Amberg teaches one to set a user-specified static network address to support particular network tasks.

Referring to claim 7: Promulgating each SCSI device's SCSI ID is retrieving the node ID information from the node ID specification device.

Referring to claim 8: Cutler discloses that it is known to promulgate the node information to each node of the system while a new node is inserted (column 1, lines 44-46 and 53). The promulgation is the claimed transmitting node ID information stored on the node ID specification.

Art Unit: 2111

Referring to claim 11: Cutler's disclosure is stated above, but Cutler does not explicit disclose that the node ID information is specified on the node ID specification device. Cutler discloses that it would be obvious to one of skill in the art to adapt his invention to any communication links (column 3, lines 15-19). Amberg discloses a SCSI network and each SCSI device has a jumper for setting the SCSI ID. Amberg teaches that it is known to set a node ID information with a physical node ID specification device. Amberg teaches one to set a user-specified static network address to support particular network communication and maintenance.

Hence, it would have been obvious to one having ordinary skill in the computer art to adapt Amberg's teaching onto Cutler because Amberg teaches one to set a user-specified static network address to support particular network tasks.

Referring to claim 12: Amberg discloses the jumper (column 1, line 23).

Referring to claim 13: Amberg discloses the DIP (column 1, line 30).

Referring to claim 14: Amberg discloses the unalterable addresses with mapping (column 1, lines 51-53). The means for storing the unalterable addresses are the read-only memory.

Referring to claims 15-16: Cutler discloses that it is known to promulgate the node information to each node of the system while a new node is inserted (column 1, lines 44-46 and 53). The promulgation is the claimed transmitting node ID information stored on the node ID specification.

Referring to claim 18: Amberg discloses the unalterable addresses with mapping (column 1, lines 51-53). The means for storing the unalterable addresses are the read-only memory.

Referring to claims 19 and 21-22: The SCSI protocol often is used with the RAID controller for server's hard drives, which store the system program and the kernel. Thus, it would be obvious to one to store the program in the hard drive.

9. Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Khare et al. (U.S. Patent No. 6,487,643) and Cutler.

Referring to claim 27: Khare discloses a multi-port switch (figure 1, structure 140) containing a plurality of ports, I/O hub controller connected to one of said ports (figure 1, structure 151), a scalable node controller connected to one of said ports (figure 1, structures 110, 120, and 130), and at least one microprocessor (figure 1, structures 111 and 112) connected to said scalable node controller. Khare discloses that each node/device is known to have its own ID for transmitting data properly (column 5, line 11), but Khare does not explicitly teach the node ID discovery process and the switch's storage device containing the node ID information for the hub controller.

Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4), and Cutler discloses that it would be obvious to one of skill in the art to adapt his invention to any communication links (column 3, lines 15-19). Cutler discloses a System Control System (SCS) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed multi-port switch. The node information stored in the routing table is the claimed node ID information for an I/O hub controller. The node receiving the SCS's routing table is equivalent to the claimed scalable node controller. Cutler discloses that each node stores the node ID of other neighboring nodes on its own routing table (column 1, lines 44-47, column 3, lines 42-46), which includes both the I/O hub controller and the switch. The storage means for the routing table is the claimed storage device.

Art Unit: 2111

Hence, it would have been obvious to one having ordinary skill in the computer art to combine Cutler's teaching onto the Khare because Cutler teaches a way to balance the traffic loads and to differentially route a data packet based on its type (Cutler, column 2, lines 22-26), and Cutler teaches that it would be obvious to one of skill in the art to adapt his invention to any communication links.

Referring to claim 28: Cutler discloses each node updates using information received from the system control station (column 3, lines 43-44), which is the claimed remote node device retrieval process for retrieving node ID information.

Referring to claim 29: Khare discloses a multi-port switch (figure 1, structure 140) containing a plurality of ports, I/O hub controller connected to one of said ports (figure 1, structure 151), a scalable node controller connected to one of said ports (figure 1, structures 110, 120, and 130), and at least one microprocessor (figure 1, structures 111 and 112) connected to said scalable node controller. Khare discloses that each node/device is known to have its own ID for transmitting data properly (column 5, line 11), but Khare does not explicitly teach the node ID discovery process and the switch's storage device containing the node ID information for the hub controller.

Cutler discloses a communication multiple node system (figures 1 and 3) routing table with node ID (figure 4), and Cutler discloses that it would be obvious to one of skill in the art to adapt his invention to any communication links (column 3, lines 15-19). Cutler discloses a System Control System (SCS) for providing routing table for each node (column 4, lines 17-20). The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed multi-port switch. The node information stored in the routing table is the claimed node ID information for an I/O hub controller. The node receiving the SCS's routing table is

Art Unit: 2111

equivalent to the claimed scalable node controller. Cutler discloses that each node stores the node ID of other neighboring nodes on its own routing table (column 1, lines 44-47, column 3, lines 42-46), which includes both the I/O hub controller and the switch. The storage means for the routing table is the claimed storage device.

Hence, it would have been obvious to one having ordinary skill in the computer art to combine Cutler's teaching onto the Khare because Cutler teaches a way to balance the traffic loads and to differentially route a data packet based on its type (Cutler, column 2, lines 22-26), and Cutler teaches that it would be obvious to one of skill in the art to adapt his invention to any communication links.

Referring to claim 30: Cutler discloses that it is known to promulgate the node information to each node of the system (column 1, line 53). The promulgation is the claimed information access process for allowing a third node device to access the node ID information stored on the second node's storage device.

Response to Arguments

10. In response to Applicant's argument that Culter's use of a centralized system control station in communication with the nodes to update the routing tables is substantially different from the claimed invention (Remark, bottom of the page 10): As Applicant pointed out, Culter discloses a System Control Station (SCS) providing each node the updated routing table. The SCS's routing table is equivalent to the claimed storage device, and the SCS is equivalent to the claimed second node device. The node information stored in the routing table is the claimed node ID information for a third node device. The node receiving the SCS's routing table is the claimed first node

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,581,740 to Jones: Jones discloses that it is known to employ SCSI RAID with the servers (abstract).

U.S. Patent No. 5,634,033 to Stewart et al.: Stewart teaches that it is known to employ SCSI protocol with hard drives (abstract).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin I. King whose telephone number is 571-272-3628. The examiner can normally be reached on Monday through Friday, 9:00 am to 5:00 pm.

Art Unit: 2111

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin King
December 21, 2004


SUMATI LEFKOWITZ
PRIMARY EXAMINER